

What is claimed is:

1. A holder for a supply roll, comprising: a hub for mounting a supply roll, a clamp having at least one clamp member extendable and movable into clamping relationship to a side of a supply roll and wherein the at least one clamp member is retractable to enable a supply roll to be loaded onto the hub, and means for extending the at least one clamp member into extended relationship to the side of the supply roll and for moving the at least one clamp member into clamping relationship to the side of the supply roll and for thereafter moving the at least one clamp member out of clamping relationship to the side of the supply roll and for retracting the at least one clamp member.

2. A holder for a supply roll, comprising: a hub for holding a supply roll, an axially extending shaft having a threaded portion with right-hand threads and a threaded portion with left-hand threads, a manually engageable knob for rotating the shaft, the hub being threadably mounted on one of the threaded portions, the clamp including a carrier, the carrier being threadably mounted on the other threaded portion, the clamp further including at least one clamp member movable between extended and retracted positions, the at least one clamp member having a slot, at least one control member mounted on the hub and extending through the slot so that rotation of the knob in one direction causes the control member to move the at least one clamp member to its extended position and causes the hub and the at least one clamp member to move toward

each other so that the at least one clamp member clamps the side of the supply roll.

3. A holder for a supply roll, comprising: a hub for holding a supply roll, an axially extending shaft having a threaded portion with right-hand threads and a threaded portion with left-hand threads, a manually engageable knob for rotating the shaft, the hub being threadably mounted on one of the threaded portions, the clamp including a carrier, the carrier being threadably mounted on the other threaded portions and having a slot, the clamp further including at least one clamp member on the carrier and movable between extended and retracted positions, the clamp member having a slot, at least one control member mounted on the hub and extending through the slots so that rotation of the knob in one direction causes the at least one control member to move the at least one clamp member to its extended position and causes the hub and the at least one clamp member to move toward each other until the at least one clamp member clamps the side of the supply roll and so that rotation of the knob in the opposite direction causes the at least one control member to move the at least one clamp member to its retracted position and causes the hub and the clamp to move away from each other.

4. A holder as defined in claim 3, wherein the knob is on the shaft.

5. A holder as defined in claim 3, wherein the hub has a shoulder, wherein the supply roll is between the shoulder and the at least one clamp member when the at least one clamp member is in its extended position.

6. A holder as defined in claim 3, wherein there are three of said clamp members and three of said control members and three of said slots in the carrier, wherein the clamp members are equally spaced on the carrier, and the control members are equally spaced on the hub.

7. A holder as defined in claim 6, wherein the clamp members are pivotally mounted on the carrier.

8. A holder as defined in claim 3, wherein the at least one clamp member is pivotally mounted on the carrier.

9. A holder for a supply roll, comprising: a hub having a shoulder, a clamp having at least one clamp member movable between a retracted position to enable a supply roll to be mounted on the hub and an extended position in which the clamp member is disposed at a side of the supply roll, and a rotatable shaft having both left-hand and right-hand threads for moving the hub and the clamp in unison toward and away from each other so that the supply roll is clamped between the shoulder and the clamp member when the clamp member is in its extended position.

10. A holder for a supply roll, comprising: a hub for locating a supply roll, a clamp having at least one clamp member movable between a retracted position to enable a supply roll to be mounted on the hub and an extended position in which the at least one clamp member is disposed at a side of the supply roll, a manually rotatable shaft, and the at least one clamp member being coupled to the shaft and to the hub to enable the at least one clamp member in its extended position to move into clamping relationship to the side of the supply roll upon rotation of the shaft.

11. A holder as defined in claim 10, wherein the shaft has left-hand and right-hand threaded portions, wherein the hub is threadably mounted on one of the threaded portions and the at least one clamp member is threadably mounted on the other of the threaded portions.

12. A holder as defined in claim 11, wherein the at least one clamp member has an elongate slot, a rod on the hub extending generally parallel to the shaft and received in the slot.

13. A holder for a supply roll, comprising: a hub for locating a supply roll, a clamp having at least one clamp member movable between a retracted position to enable a supply roll to be mounted on the hub and an extended position in which the at least one clamp member is disposed at a side of the supply roll, a shaft manually rotatable in opposite directions, and the at least one clamp member being coupled to the shaft and to the hub to enable the at least one clamp member in its extended position to move into clamping relationship to the side of the supply roll upon rotation of the shaft in one direction and to enable the at least one clamp member to move out of clamping relationship upon rotation of the shaft in the other direction.

14. A holder for a supply roll, comprising: a hub for mounting a supply roll, a clamp extendable and movable into clamping relationship to a side of the supply roll and retractable to enable a supply roll to be loaded onto the hub, a shaft having left-hand and right-hand threaded portions, the hub being threadably mounted by one of the threaded portions and the clamp being threadably mounted by the other of the threaded portions to enable movement

of the hub and the clamp relatively toward and away from each other.

15. A holder as defined in claim 14, wherein the clamp includes a carrier threadably received by the other of the threaded portions and the at least one clamp member on the carrier movable between extended and retracted positions.

16. A holder as defined in claim 15, wherein the at least one clamp member is pivotally mounted to the carrier, and at least one control member on the hub, wherein the at least one control member causes the at least one clamp member to move between extended and retracted positions upon rotation of the shaft.

17. A holder as defined in claim 14, including a knob for rotating the shaft.

18. A holder as defined in claim 17, wherein the knob is cup-shaped.

19. A holder for a supply roll, comprising: a hub for mounting a supply roll, a clamp having at least one clamp member extendable and movable into clamping relationship to a side of a supply roll and wherein the at least one clamp member is retractable to enable a supply roll to be loaded onto the hub, and means for extending the at least one clamp member into extended relationship to the side of the supply roll and for moving the at least one clamp member into clamping relationship to the side of the supply roll.

20. Method of holding a supply roll, comprising: mounting a supply roll on a hub, providing at least one clamp member, moving the at least one clamp member from a retracted position to an extended position along a side of the supply roll, and moving the at

least one clamp member and the hub toward each other in unison to clamp the supply roll to the hub.

21. Method of holding a supply roll, comprising: mounting a supply roll on a hub, providing at least one clamp member, and simultaneously moving the at least one clamp member from a retracted position to an extended position along a side of the supply roll and moving the at least one clamp member and the hub relatively toward each other to clamp the supply roll to the hub.

22. Method of holding a supply roll, comprising: mounting a supply roll on a hub, providing at least one clamp member, moving the at least one clamp member from a retracted position to an extended position along a side of the supply roll, moving the at least one clamp member in its extended position and the hub relatively toward each other to clamp the supply roll to the hub, and thereafter moving the at least one clamp member from the extended position to the retracted position and relatively away from the hub.

23. Method of holding a supply roll, comprising: mounting a supply roll on a hub, providing at least one clamp member, simultaneously moving the at least one clamp member from a retracted position to an extended position along a side of the supply roll and moving the at least one clamp member and the hub relatively toward each other to clamp the supply roll to the hub, and simultaneously moving the at least one clamp member from the extended position to the retracted position and moving the at least one clamp member and the hub relatively away from each other.

24. A printer, comprising: a print head, a center-justifying holder for a web on a supply roll, the holder having a hub for

locating the web roll, a clamp movable between a retracted position to enable a supply roll to be mounted on the hub and an extended position in which the clamp is disposed at a side of the supply roll, a manually rotatable shaft, the hub and the clamp being coupled to the shaft to enable the clamp in its extended position to move in unison with the hub to bring the supply roll into alignment with the print head and to clamp the supply roll onto the hub upon rotation of the shaft.

25. A printer as defined in claim 24, wherein the shaft has a left-hand threaded portion and a right-hand threaded portion, wherein the hub is threadably mounted on one portion and the clamp is threadably mounted on the other portion.

26. A spindle assembly, comprising: a spindle for mounting supply roll cores of different predetermined widths having respective webs of different widths wound thereon, a latch movably mounted on the spindle and having at least two pairs of stepped shoulders engageable with opposite ends of a supply roll core of a predetermined width, and the mounted supply roll core being center-justified on the spindle by and between the engaged pair of shoulders of the latch.

27. A spindle assembly as defined in claim 26, wherein the latch is comprised of a latch member pivotally mounted on the spindle, and at least one spring that urges the latch member into contact with the core.

28. A spindle assembly as defined in claim 26, wherein the latch is disposed adjacent the spindle and is configured to be received inside the core.

29. A spindle assembly as defined in claim 26, wherein the latch is essentially flat.

30. A spindle assembly as defined in claim 26, wherein the latch includes a manually operable handle to disengage the latch from the core.

31. A spindle assembly as defined in claim 26, wherein the latch is pivotally mounted on the spindle.

32. A spindle assembly as defined in claim 26, in combination with a splined core non-rotatably mounted in the spindle.

33. A spindle assembly, comprising: a spindle for mounting supply roll cores of different predetermined widths having respective webs of different widths wound thereon, and a latch movably mounted on the spindle and having a set of stepped shoulders engageable with an end of the supply roll core of a predetermined width, and the mounted supply roll core being edge-justified on the spindle by the engaged shoulder of the latch.

34. A spindle assembly as defined in claim 33, wherein the spindle includes a stop surface engageable by one end of the engaged core.

35. Method, comprising: providing a spindle having an axis and at least one pair of connected shoulders movably mounted on the spindle, wherein the spindle is capable of mounting a supply roll having a web wound onto a core, and moving the pair of shoulders in unison transversely with respect to the spindle axis to a position adjacent opposite ends of the core when the core is center-justified with respect to the spindle.



36. Method, comprising: providing a spindle and two connected pairs of shoulders movably mounted on the spindle, wherein the spindle is capable of mounting supply roll cores of different widths having respective webs of different widths wound thereon, and moving the pair of shoulders that correspond to a core of a predetermined width into straddling relationship to the ends of core when the core is center-justified with respect to the spindle.

37. Method, comprising: providing a spindle and at least two pairs of connected shoulders movably mounted on the spindle, wherein the spindle is capable of mounting supply rolls with cores of different widths having respective webs of different widths wound thereon, and sliding a supply roll onto the spindle until the supply roll is center-justified on the spindle whereupon the pair of shoulders corresponding to the width of the core are movable into straddling relationship with the ends of the core.

38. Method, comprising: providing a spindle and at least two pairs of connected shoulders movable mounted on the spindle, wherein the spindle is capable of mounting supply rolls with cores of different widths having respective webs of different widths wound thereon, and sliding a supply roll onto the spindle until the supply roll is center-justified on the spindle whereupon the pair of shoulders corresponding to the width of the core are spring-biased into straddling relationship with the ends of the core.

39. Method, comprising: providing a spindle and a set of stepped shoulders movably mounted on the spindle, wherein the spindle is capable of mounting supply roll cores of different widths having respective webs of different widths wound thereon, and

moving the set of stepped shoulders to bring the shoulders corresponding to the width of the mounted core in face-to-face relationship with one end of the core when the core has been brought to an edge-justified stop position on the spindle.

40. A printer, comprising: a print head, an arm, a driving gear, a driven gear drivingly coupled to the driving gear, the arms having a pivot axis, the driving gear being mounted along the pivot axis, a platen roll cooperable with the print head to print on a web and to advance the web, the platen roll being cantilevered and rotatably mounted to the arm, the platen roll being driven by the driven gear.

41. A printer as defined in claim 40, wherein the driving gear meshes with the driven gear.

42. A printer as defined in claim 40, wherein the print head is stationarily mounted, and wherein the cantilevered platen roll is located and releasably held in printing cooperation with the print head.

43. A printer as defined in claim 40, including at least one locator to locate the platen roll in a located printing position with respect to the print head, and at least one latch to releasably hold the cantilevered platen roll at the located position.

44. A printer as defined in claim 40, wherein the driven gear is secured to the platen roll.

45. A printer as defined in claim 40, a shaft rotatably mounted on the arm, wherein the driven gear and the platen roll are secured to each other and rotate as a unit.

46. A printer as defined in claim 40, wherein the arm mounts the platen roll to move user-selectively between a non-printing position out of cooperation with the print head and a printing position in printing cooperation with the print head.

47. A printer as defined in claim 40, including a printer frame plate, wherein the arm and the gears are disposed on one side of the frame plate and the print head and platen roll are disposed on the other side of the frame plate, and an opening in the printer frame plate to allow the arm and the platen roll to move in unison.

48. A printer comprising: a print head, an arm, an electric motor having a first shaft, a first gear on the first shaft, an arm having a pivot axis, a second gear mounted along the pivot axis and meshing with the first gear, a third gear mounted on the arm and meshing with the second gear, a platen roll secured against rotation to the third gear, the platen roll being cooperable with the print head to print on a web, rotation of the arm being effective to move the platen roll user-selectively between a non-printing position out of cooperation with the print head and a printing position in printing cooperation with the print head.

49. A printer as defined in claim 48, including a shaft for the platen roll, the third gear being secured to the shaft, a frame plate, the arm and the third gear being on one side of the frame plate, the platen roll being on the other side of the frame plate, and an opening in the frame plate through which the shaft extends.

50. A printer as defined in claim 48, including a feed roll downstream of the platen roll, and a fourth gear meshing with the first gear for driving the feed roll.

51. A printer as defined in claim 50, including a stacker to stack tags cut from the web, the stacker including a feed wheel, and a drive connection to one of the gears to drive the stacker feed wheel.

52. A printer, comprising: a frame, a first print head, an idler platen roll cooperable with the first print head to print on one side of a web, a second print head, and a driven platen roll cooperable with the second print head and disposed downstream of the first platen roll to print on the other side of the web.

53. A printer as defined in claim 52, including an auxiliary feed wheel downstream of the driven platen roll to feed the web away from the second platen roll.

54. A printer as defined in claim 53, including a cutter disposed downstream of the auxiliary feed wheel to cut printed labels from the web.

55. A printer as defined in claim 54, including a stacker to accumulate labels in a stack, wherein the stacker includes a feed wheel downstream of the cutter for feed labels from the cutter into the stack.

56. A printer as defined in claim 52, a pivotally mounted arm on which the idler platen roll is cantilevered to provide for selective positioning of the idler platen roll into and out of printing cooperation with the first print head, and another pivotally mounted arm on which the driven platen roll is cantilevered to provide for selective positioning of the driven platen roll into and out of printing cooperation with the second print head.

57. A printer as defined in claim 52, wherein the second platen roll is downstream of the first platen roll.

58. A printer, comprising: a print head, a rotatable and pivotally mounted platen roll movable from between a non-printing position out of cooperation with the print head and a printing position in printing cooperation with the print head, a spring for urging the platen roll to the non-printing position, the platen roll being manually movable against the force of the spring to the printing position, and a latch member to releasably hold the platen roll in the printing position.

59. A printer as defined in claim 59, including a pivotally mounted arm, and the platen roll being cantilevered and rotatably mounted on the arm.

60. A printer, comprising: a print head, a latch including at least one latch member movable between latched and unlatched positions, a platen roll movable into and out of printing cooperation with the print head, at least one spring, the latch member being cammed by the platen roll against the urging of the spring to a position to receive the platen roll, and the spring being effective to urge the latch member to its latched position to enable the latch to hold the platen roll in printing cooperation with the print head.

61. A printer as defined in claim 60, wherein the latch member has a cam surface contactable by the platen roll.

62. A printer as defined in claim 60, wherein the platen roll includes a shaft and a resilient sleeve on the shaft, wherein the cam surface is contacted by the platen roll at a position adjacent to the sleeve.

63. A printer as defined in claim 60, wherein the platen roll includes a resilient sleeve, the sleeve being mounted on a shaft, a bearing adjacent the sleeve for contacting the latch member to cam the latch member to the unlatched position, and the bearing being received by the latch member in the latched position.

64. A printer as defined in claim 60, wherein the latch includes a pair of latch members, the platen roll includes a sleeve on a shaft, bearings on the shaft outboard of the sleeve, and wherein the latch members cooperate with the bearings to receive and releasably hold the platen roll in printing cooperation with the print head.

65. A printer as defined in claim 64, wherein the latch members are connected to move in unison.

66. In combination: a printer, a print head, a platen roll cooperable with the print head to print on a web, an electric motor, a stacker for stacking printed labels cut from the web, the stacker including a stacker feed roll to feed labels into the stacker, and an electric motor for driving the platen roll and the stacker feed roll.

67. The combination defined in claim 66, including a cutter to cut labels from the web downstream of the platen roll, and another electric motor to selectively drive the cutter.

68. The combination defined in claim 66, including an endless belt driven by the motor and drivingly coupled to the platen roll and the stacker feed roll.

69. In combination: a printer including a print head, a platen roll cooperable with the print head to print on a web and to feed the web, an auxiliary feed roll, a stacker for stacking printed labels cut from the web, the stacker including a stacker feed roll to feed labels

into the stacker, and a single electric motor coupled to drive the platen roll, the auxiliary feed roll and the stacker feed roll.

70. The combination defined in claim 69, including gearing driven by the electric motor to drive the platen roll and the auxiliary feed roll, and an endless belt coupled to the gearing to drive the stacker feed wheel.

70. The combination defined in claim 69, including a knife, and another motor to drive the knife to cut labels from the printed web.

71. In combination: a printer having a generally vertical frame plate, a print head mounted on the frame plate, a stacker to form a stack of printed labels, the stacker having rear wall inclined upwardly and rearwardly and a side wall inclined downwardly and outwardly away from the printer, and a platform mounted adjacent the side and rear walls and movable to lower positions as labels accumulate on the platform.

72. The combination defined in claim 71, wherein the platform is movably mounted to the rear wall, and a motor for lowering the platform.

73. The combination as defined in claim 71, wherein the stacker includes a feed roll to feed the labels forwardly onto the platform and thereafter to feed the trailing edges of the labels against the front wall.

74. The combination as defined in claim 71, wherein the labels are advanced longitudinally, and wherein the stacker is laterally adjustable relative to the printer.

75. The combination as defined in claim 74, at least one horizontally extending support secured to the frame plate, the stacker being secured to the support at a selective lateral position.

76. A stacker for stacking labels, each label having a leading edge and a trailing marginal edge terminating at a trailing edge, the stacker comprising: a wall, a feed roll, wherein the feed roll feeds the labels past the wall onto the top of a stack, and the feed roll being positioned to contact the upper side of the trailing marginal edge of the label to feed the label in the retrograde direction until the trailing edge of the label contacts the wall.

77. Method of stacking labels, each label having an underside, a leading edge and a trailing marginal edge terminating at a trailing edge, providing a wall and a feed wheel, rotating the feed wheel in contact with the underside of the labels to feed the label past the wall onto the top of a stack, the feed wheel being positioned to contact the upper trailing marginal edge of the label and upon continued rotation of the feed wheel the feed wheel feeds the top label in the retrograde direction to cause the trailing edge to abut the wall.

78. A stacker, comprising: a platform to accumulate labels in a stack, a feed roll to feed labels onto the top of the stack, an electric motor, a cable coupled to the motor and the platform to lower the platform as the amount of labels in the stack increases.

79. A stacker as defined in claim 78, including a pair of pulley wheels, a capstan driven by the electric motor, the cable passing about the capstan and partially about the pulley wheels and connected to the platform.



80. A spindle assembly, comprising: an axially extending spindle for mounting a supply roll core having a web wound thereon, a latch movably mounted on the spindle and having at least one pair of spaced connected shoulders engageable with opposite ends of the supply roll core, the supply roll core being center-justifiable on the spindle and confinable by and between the pair of shoulders.

81. Method, comprising: providing a spindle and at least one pair of connected shoulders movably mounted on the spindle, wherein the spindle is capable of mounting a supply roll core with a web wound thereon, and sliding a supply roll onto the spindle until the supply roll core is center-justified on the spindle whereupon the pair of shoulders corresponding to the width of the core are movable into straddling relationship with respect to the end portions of the core.

82. A spindle assembly, comprising: an axially extending spindle for mounting a supply roll core having a web wound thereon, a latch movably mounted on the spindle and having opposed connected portions engageable with opposed end portions of a supply roll core, the supply roll core being center-justifiable on the spindle and confinable by and between the opposed portions of the latch.

83. A spindle assembly as defined in claim 82, wherein the opposed portions comprise oppositely inclined surfaces.

84. A spindle assembly as defined in claim 82, where the opposed portions comprise inclined edges.

85. Method comprising: providing a spindle for mounting a supply roll core with a web wound thereon and a latch on the spindle having portions engageable with end portions of a core, and sliding the core onto the spindle until the core is center-justified on the spindle whereupon the engageable portions are movable into and out of latching engagement with respect to the end portions of the core.

86. Method, comprising: providing a spindle for mounting a supply roll core with a web wound thereon and a pivotal releasable latch on the spindle having a portion engageable with one end of a core when the core is keyed against rotation on and relative to the spindle and is at an edge-justified stop position on the spindle, and sliding the core onto the spindle until the core is in the stop position whereupon the latch is pivoted into latching engagement with the other end of the core.

87. A spindle assembly, comprising: an axially extending spindle for mounting a supply roll core and having a web wound thereon, a latch movably mounted on the spindle and having a portion engageable with one end portion of the core when the core is in a stop position, sliding the core onto the spindle until the core is in the stop position with the core keyed against rotation on the spindle, and moving the latch so that the engageable portion contacts the one end portion of the core.

88. A spindle assembly as defined in claim 87, wherein the engageable portion comprises a surface inclined with respect to the axial direction.

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89. A spindle assembly as defined in claim 87, wherein the engageable portion comprises an inclined edge.